CLAIMS.

1. A method for preparing a dissolved catalyst component comprising the steps of:

a) providing a halogenated precursor component of formula (I)

$$—X-[-CH_2-]- \quad (I)$$

b) reacting the halogenated precursor with an ionic liquid precursor in a solvent to prepare an ionic liquid;

c) mixing in a solvent one equivalent of the ionic liquid prepared in step b) with a metallic complex of formula (II)

$$L_2MY_2 \quad (II)$$

wherein L is a coordinating ligand for the metallic site, said coordination being achieved by phosphorus, nitrogen or oxygen;

d) evaporating the solvent; and

e) retrieving a hybrid single site catalyst component/ionic liquid system.

2. The method of claim 1 wherein the ionic liquid precursor is N -alkyl-imidazolium or pyridinium.

3. The method of claim 1 or claim 2 wherein between step b) and step c), the reaction product of step b) is reacted with an ionic compound C^+A^-, wherein C^+ is a cation selected from K^+, Na^+, NH_4^+, and A^- is an anion selected from PF_6^-, SbF_6^-, BF_4^-, $(CF_3-SO_2)_2N^-$, $ClO4^-$, $CF_3SO_3^-$, NO_3^- or $CF_3CO_2^-$.

4. The method of any one of the preceding cla ims wherein the solvent used in steps b) and step c) is selected from THF, CH_2Cl_2 or CH_3CN.

5. A hybrid organometallic complex/ionic liquid system obtainable by the method of any one of claims 1 to 4.

6. A hybrid catalyst system comprising the hybrid organomet allic complex/ionic liquid system of claim 5 and an activating agent.

7. The hybrid catalyst system of claim 6 wherein the activating agent is methylaluminoxane and wherein Y is a halogen.

8. The hybrid catalyst system of claim 7 wherein the amount of methylaluminoxane is such that the Al/M ratio is of from 100 to 1000.

9. A method for homopolymerising or copolymerising alpha -olefins that comprises the steps of:

a) heterogenising the hybrid catalyst system of any one of claims 6 to 8 by addition of an apolar solvent;
b) injecting into the reactor an apolar solvent and the heterogenised catalyst system of step a)
c) injecting the monomer and optional comonomer into the reactor;
d) maintaining under polymerisation conditions;
e) retrieving the polymer under the form of chips or bl ocks.

10. The method of claim 9 wherein the apolar solvent is n -heptane.

11. The method of claim 9 or claim 10 wherein the monomer is ethylene or propylene.

12. A polymer having particle sizes of at least 0.5 mm obtainable by the process of any one of claims 9 to 1 1.